REMARKS

This response addresses the issues raised by the Examiner in the Office Action mailed April 25, 2006. Initially, Applicant would like to thank the Examiner for the careful consideration given in this case. Original claims 1 to 39 have been canceled. New claims 40 to 129 have been added.

The following chart delineates the new claims, their relationship to the original claims, and the location for their support in the specification:

New claim (corresponding original claim)	Support in specification
40 (1), 119	Page 3, lines 1-28
83 (38), 102 (39), 120-125	Page 3, lines 1-28
41, 67, 84, 94, 103, 111, 126	Page 5, lines 23-24
42, 68, 85, 95, 104, 112, 127	Page 5, lines 21-23
43 (2), 69 (25), 86, 96, 105, 113, 128	Page 3, lines 28-29
44, 70, 87, 97, 106, 114, 129	Page 14, lines 25-27
45 (3), 51 (9), 71 (26), 77 (32), 88, 90, 98, 100, 107, 115, 117	Page 3, line 29 to page 4, line 1
46 (4), 52 (10), 72 (27), 78 (33), 89, 91, 99, 101, 108, 116, 118	Page 3, line 29 to page 4, line 1
47 (5), 53 (11), 57 (15), 73 (28), 79 (34)	Page 4, line 1
48 (6), 54 (12), 58 (16), 61 (19), 74 (29), 80 (35)	Page 3, line 21 to page 4, line 2
49 (7), 55 (13), 59 (17), 62 (20), 75 (30), 81 (36)	Page 4, lines 1-2
50 (8), 56 (14), 60 (18), 63 (21), 64 (22), 76 (31), 82 (37)	Page 4, lines 1-2
65 (23), 92, 109	Page 4, lines 5-8
66 (24), 93, 110	Page 4, lines 5-8

The Examiner objected to informalities with respect to original claim 39 (new claim 102) and suggested an amendment to correct the informalities identified. Corresponding new claim 102 incorporates the changes suggested by the Examiner.

The Examiner objected to the drawings because the symbols for doxorubicin and paclitaxel are indistinguishable in black and white. Applicant submits herewith a

replacement sheet in compliance with 37 C.F.R. 1.121(d) that more clearly distinguishes the symbols for doxorubicin and paclitaxel.

Reply to 35 U.S.C. § 112, First Paragraph Rejection

The Examiner has rejected original claims 38 and 39 (corresponding to new claims 83 and 102, respectively) under 35 U.S. C. § 112, first paragraph. Specifically, the Examiner contends that the claims would require undue experimentation, since the specification "does not reasonably provide enablement for a method of providing chemotherapeutic treatment for any type of cancer using any chemotherapeutic agent." Office Action at p. 3. Applicant respectfully traverses this rejection for the following reasons.

With respect to the Examiner's characterization of the prior art on page 3 of the Office Action, Applicant agrees with the Examiner that "[n]o single chemotherapeutic drug is useful for the treatment of every case of cancer." However, it is well-known in the art which cancers are (and are not) responsive to particular chemotherapeutic agents, as reflected in the Merck Manual of Diagnosis and Therapy, cited by the Examiner at pages 4 and 5 of the Office Action.

Indeed, the establishment of a dose-response curve, for a particular chemotherapeutic agent, against a particular cancer, is part of the routine experimentation that takes place in the field of oncology. The specification recognizes that "[c]hemotherapeutic agents have been shown to have concentrations of maximum effectiveness, above which the dose-response curve for killing of cancer cells plateaus," and that "[t]his concentration represents an upper limit for the concentration of the chemotherapy agent employed in the present invention, since additional therapeutic agent increases side effects without increasing therapeutic benefit." Specification at 7.

While new claims 83 and 102 cover a wide array of cancers and chemotherapeutic agents, the experimentation required to arrive at an optimal dose, for a particular chemotherapeutic agent, against a particular cancer, is absolutely routine in the field of oncology—one skilled in the art would know which agent (or agents), at which dose, is

effective against which type of cancer. See M.P.E.P. § 2164.01(c) ("[I]t is not necessary to specify the dosage or method of use if it is known to one skilled in the art that such information could be obtained without undue experimentation;" see also M.P.E.P. § 2164.01 ("A patent need not teach, and preferably omits, what is well known in the art.") Moreover, new claims 83 and 102 require that a "therapeutically-effective" amount of a chemotherapeutic agent be administered. Accordingly, the only further experimentation required by the claims would be to determine the shortest tolerated interval between treatments using an empirically effective amount of chemotherapeutic agent against a particular cancer. This does not amount to undue experimentation. See M.P.E.P. § 2164.01 ("The test of enablement is not whether any experimentation is necessary, but whether, if experimentation is necessary, it is undue.")

Accordingly, Applicant respectfully submits that new claims 83 and 102 are enabled by the specification and requests that the rejection under 35 U.S.C. § 112, first paragraph, be reconsidered and withdrawn.

Reply to 35 U.S.C. § 102 Rejection

The Examiner has rejected original claims 1-3, 9, 19, 23-26, 32 and 38-39 (corresponding to new claims 40, 43, 45, 51, 61, 65, 66, 69, 71, 77, 83 and 102, respectively), in light of Hudis et al., under 35 U.S.C. § 102. Applicant respectfully traverses this rejection for the following reasons.

Hudis et al. discloses a sequential and dose-dense treatment regimen for breast cancer consisting of 3 cycles of doxorubicin 90 mg/m^2, followed by 3 cycles of paclitaxel 250 mg/m^2, and finally 3 cycles of cyclophosphamide 3 g/m^2. P. 18, col. 1.

Hudis et al. does not disclose the administration of "well-tolerated" dosages, as specified by independent claims 1, 38 and 39. Rather, the dosages administered in Hudis et al. led to "marked neutropenia," with "67% of patients requiring transfusions of packed red blood cells or platelets." P. 20, col. 2 and p. 22, col. 1. In contrast, as shown in Table 4 of the specification, the well-tolerated doses of the invention greatly minimize the incidence of side-effects seen in the prior art.

Thus, since Hudis et al. does not disclose or suggest the administration of well-tolerated doses, it cannot anticipate new claims 40, 43, 45, 51, 61, 65, 66, 69, 71, 77, 83 and 102. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. § 102 be reconsidered and withdrawn.

Reply to 35 U.S.C. § 103(a) Rejection

The Examiner has rejected original claims 4-8, 10-18, 20-22, 27-31 and 33-37 (corresponding to new claims 46-50, 52-60, 62-64, 72-76 and 78-82, respectively) as obvious, in light of Hudis et al. and Henderson et al., under 35 U.S.C. § 103(a). Applicant respectfully overcomes this rejection for the following reasons.

At page 10 of the Office Action, the Examiner states that "it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Hudis et al. by reducing the dosage of the drugs used and increasing the number of cycles of each treatment." Applicant respectfully disagrees.

According to the M.P.E.P., in order to establish prima facie obviousness, there must be, inter alia, "some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary kill in the art, to modify the reference or to combine reference teachings," and "there must be a reasonable expectation of success." M.P.E.P. § 2143.

Neither Hudis et al. nor Henderson et al. suggest combining the teachings of the referenced prior art. Nor would one of ordinary skill in the art be motivated to combine the references based on knowledge generally available to one in the art, since Henderson et al. and Hudis et al. disclose fundamentally different treatment regimens: Henderson discloses a conventional, i.e. non-dose-dense therapy, while Hudis et al. discloses a dose-dense therapy; moreover, in Henderson et al., cyclophosphamide and doxorubicin were administered concurrently, not sequentially as in Hudis et al. In other words, the fact that dose escalation of doxorubicin had no effect on survival in Henderson et al. could be attributed to the fact that doxorubicin was administered concurrently with cyclophosphamide. For the same reason, there would be no reasonable expectation of

success in combining the dosages and number of treatment cycles disclosed in Henderson et al. with the shortened treatment intervals and sequential administration disclosed in Hudis et al..

Even assuming, for the sake of argument, that the combination of Henderson et al. and Hudis et al. rendered the use of doxorubicin at 60 mg/m^2 in a dose-dense regimen obvious (it does not), the same cannot be said with respect to cyclophosphamide and paclitaxel. Henderson et al. does not examine whether increasing doses of those agents had an effect on survival. Thus, one skilled in the art would not be able to conclude, one way or the other, whether 175 and 600 mg/m^2 doses of paclitaxel and cyclophosphamide would be more, or less, effective than higher doses of those agents using shorter treatment intervals.

Finally, Hudis et al. expressly teaches away from the lower dosage regimens disclosed in Henderson et al. and the specification. Specifically, Hudis et al. notes that "[c]ombined with new drug discovery, dose escalation and intensification of the known active adjuvant therapy agents represent the likeliest route to improved survival from resected breast cancer," and that "the dose reductions of doxorubicin required to allow simultaneous therapy with paclitaxel or other agents may compromise effectiveness." P. 21, col. 2. (Emphasis added).

For the foregoing reasons, Applicant respectfully submits that new claims 46-50, 52-60, 62-64, 72-76 and 78-82 are unobvious in light of Hudis et al. and Henderson et al. and requests that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 103 (a).

Conclusion

In view of the remarks presented herein, it is respectfully submitted that the present application is in condition for final allowance and notice to such effect is requested. If the Examiner believes that additional issues need to be resolved before this application can be passed to issue, the undersigned invites the Examiner to contact him at the telephone number provided below. If there are any fees due, please charge any such

fees to our deposit account No. 501561 and reference attorney docket number 93580.010100.

Respectfully,

Date: July 25, 2006

By: _____

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